

# ONYX 69300

## Detergent Additive Package for Marine Trunk Piston Engine Oil

### DESCRIPTION

ONYX 69300 is a part additive package for the formulation of trunk piston engine oils. In combination with the core package ONYX 63000, ONYX 69300 brings superior performance in sludge control and oxidation protection in marine and stationary diesel engines burning low, medium or high sulfur fuel oils.

### DOSAGE

ONYX 69300 can be used at varied treat rates along with ONYX 69000 to blend TPEO to the required base numbers.

ONYX 69300 Wt.%	ONYX 69000 Wt.%	TBN (mg KOH/g)
4.1	1.5	12
5.1	1.5	15
6.7	1.5	20
10.2	1.5	30
13.5	1.5	40
17.0	1.5	50
18.8	1.5	55

### PHYSICAL / CHEMICAL CHARACTERISTICS

Parameters	Test Methods	Specifications	Typical Value
Viscosity@ 100°C, cSt	ASTM D445	Report	50
Calcium, % Wt	ASTM D4951	8.5 – 12	10.6
BN	ASTM D2896	295	299
Flash Point, °C	ASTM D92	Report	200
Specific Gravity @15.6 °C	ASTM D1298	Report	1.073

**GENERAL HANDLING INSTRUCTIONS**

Neoprene or nitrile rubber gloves and safety goggles should be worn for handling. Maximum handling temperature is 65°C. Material safety data sheet should be consulted for specific information and for information on health and safety.

**Temperature Recommendations**

<b>Unloading:</b>	<b>Temperature</b>	
Pumping temperature	60°C	140°F
Maximum temperature	65°C	149°F
<b>Storage:</b>		
Maximum temperature for long term storage	45°C	113°F
<b>Blending:</b>		
Max. Base oil temperature for mechanical or in-line mixing	65°C	149°F

**Equipment Recommendations**

Type of Pump	Positive Displacement
Type of transfer line	Ball lunched, Insulated, Steam Traced Using 107°C/225F Steam Max.
Transfer Line Size	2-3inch/5-8cm.

**Heat Source**

Type	Steam 107°C/225°F max.
Storage Tank	Suction Heater Recommended